RECORD OF DECISION

SAN JUAN NATIONAL FOREST

Amendment
of the
Land and Resource Management Plan

SAN JUAN NATIONAL FOREST

Archuleta, San Juan, La Plata, Montezuma,
Dolores, Mineral, Hinsdale, Conejos, San Miguel,
and Rio Grande Counties, Colorado

USDA FOREST SERVICE

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I. INTRODUCTION

This Record of Decision (ROD) explains the rationale and basis for the decision to approve Amendment 14 to the San Juan National Forest's Land and Resource Management Plan. The decision is to;

Establish a new Allowable Sale Quantity (ASQ) and reduce the number of acres designated as suited for timber production.

Change the lands designated as Management Area 9B to other Management Areas.

Change the Management Requirements (Forest Direction and Management Area Direction) for silviculture to emphasize uneven-aged timber management systems.

Change the monitoring requirements for timber management to include additional indicators of changes in the demand for timber.

Section II of this ROD describes the issues identified during the Amendment process. Section III provides a detailed description of the decisions summarized above and discusses the implications these decisions have for management of the Forest. Section IV describes the factors that affected each decision and why the Amended Plan maximizes net public benefits. Section V contains responses to the USDA Secretary's decision to remand the original Forest Plan. Section VI describes the decision process, including descriptions of the alternatives considered. Section VII includes a discussion on implementation and monitoring of the Amended Forest Plan.

This decision is made with full knowledge and consideration of the estimated environmental, social, and economic consequences of the alternatives developed to address the issues.

The Forest Supervisor determined, as directed in 36 Code of Federal Regulations (CFR) 219.10(f), that the Amendment is a significant change to the original Forest Plan. The Supervisor's significance determination is based on considerations of the National Forest Management Act of 1976, the National Environmental Policy Act of 1969, the implementing regulations for these laws (36 CFR 219 and 40 CFR 1500-1508), and further policy as directed in Forest Service Manuals and Handbooks.

The significance of the Amendment required the preparation of a Supplement to the Environmental Impact Statement (EIS) for the original Forest Plan. The significance of the Amendment requires my approval as Regional Forester for the Rocky Mountain Region of the United States Department of Agriculture, Forest Service.

Background

The original Forest Plan was approved in a Record of Decision on September 23, 1983. An EIS was developed for the Forest Plan following the requirements of the National Environmental Policy Act of 1969. The Regional Forester's decision to approve the Forest Plan was appealed by the Natural Resources Defense Council (NRDC) under the Agency's administrative appeal regulations (36 CFR 211.18). NRDC represented several other special interest groups, including the Public Lands Institute, the Wilderness Society, the National Audubon Society, the Colorado Open Space Council (now known as the Colorado Environmental Coalition), the Colorado Mountain Club, the Colorado Wildlife Federation, and the San Juan Audubon Society (Chief's Appeal #943, September 29, 1983).

In ruling on the NRDC appeal, the Chief of the Forest Service remanded the Forest Plan on September 10, 1984, for further documentation of the timber suitability analysis and the ASQ (FSEIS p. I-3). The Secretary of Agriculture chose to review the Chief's decision. The Secretary's decision, signed by Deputy Assistant Secretary Douglas W. MacCleery on July 31, 1985, required additional explanation in the ROD of how the alternative selected for the Plan maximized net public benefits (FSEIS p. I-3). The Secretary's decision emphasized the role of the ROD in providing an explanation of how the decision was made to approve the Plan.

A review of the Secretary's decision concluded that additional analysis was needed. The Forest Supervisor evaluated other changes which had occurred on the Forest since the Plan was approved, primarily the local demand for National Forest timber. Based on this evaluation, the Forest Supervisor decided that the Plan needed to be changed with a significant amendment. I approved of this decision in July 1987.

The Forest published a Notice of Intent to prepare a Supplement to the original EIS for the Forest Plan and to change the Plan through a significant amendment. The notice was published in the Federal Register on August 26, 1987 (52 Fed. Reg. p. 32150). (See letters dated September 10, 1984; July 31, 1985; and September 11, 1985 - FSEIS, Appendix C, pp. 16-49).

The Forest issued a Draft Supplement to the Environmental Impact Statement (DSEIS) and a Proposed Amendment to the Land and Resource Management Plan to the public for review and comment on November 15, 1989. The public comment period closed on March 20, 1990. The Forest staff evaluated the public comments, developed responses to the comments, adjusted analytical models, evaluated new alternatives in response to the public comments, and finalized the Supplement to the EIS and Amended Forest Plan. The Supplement is tiered to the original EIS for the Forest Plan, which is still a valid document.

Purpose and Need for the Amendment

The purpose of Amendment 14 is to update the timber management program for the Forest to reflect changes that have occurred since the Plan was approved in 1983. The ASQ is being changed based upon consideration of multiple-use objectives for the Plan and net public benefits to be derived from the San Juan National Forest. Public opinion on silvicultural methods (how we manage timber) has changed and, in response, we need to adjust the emphasis from even-aged methods (clearcut and shelterwood) to uneven-aged methods (selection).

Affected Area

The San Juan National Forest encompasses approximately 1,870,000 acres of National Forest System lands in southwestern Colorado. The Forest is a part of the Rocky Mountain Region of the Forest Service, U. S. Department of Agriculture. Portions of the Forest lie within La Plata, Montezuma, Dolores, San Juan, Archuleta, San Miguel, Hinsdale, Mineral, Conejos, and Rio Grande Counties.

Types of Decisions made in the Forest Plan

The Chief of the Forest Service clarified the types of decisions made in a Forest Plan in his decision on appeals of the Flathead National Forest Land and Resource Management Plan (Chief's appeals #1467 and #1543). The Chief's decision was upheld in a subsequent judgement from the Montana Federal District Court on November 6, 1991 (Resources Limited Incorporated versus Robertson). The decisions in a Forest Plan may generally be categorized as:

1. Establishment of forest multiple-use goals and objectives, including an identification of the quantities of goods and services that are expected to be produced [36 CFR 219.11 (b)].

2. Establishment of forest-wide management requirements (standards and guidelines) to fulfill requirements of the National Forest Management Act of 1976 (NFMA) applying to future activities (36 CFR 219.13, 219.26, and 219.27).

3. Establishment of management area direction (management area prescriptions) applying to future management activities in each management area (36 CFR 219.11).

4. Establishment of allowable timber sale quantity and designation of land that is suitable for timber production (36 CFR 219.14 and 219.16).

5. Monitoring and evaluation requirements (36 CFR 219.11).

6. Project level decisions (irretrievable commitment of resources) if the projects are specifically identified in the Record of Decision and the Forest Plan and the environmental effects of the projects are disclosed for NEPA purposes in the Final Environmental Impact Statement.

Amendment Number 14 changes decisions made in the original Forest Plan in five areas listed above: goals and objectives, standards and guidelines, suitable lands, the allowable timber sale quantity, and the Monitoring and Evaluation requirements. The Amended Plan does not include decisions on site specific projects.

Authority

The NFMA requires development, maintenance, amendment, and revision of land and resource management plans (LRMP) for each unit of the National Forest System. The LRMPs put in place a dynamic management system so that an interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences will be applied to all future actions on the unit [16 U.S.C. 1604(b), 1604(f), 1604(g), and 1604(i)]. This management system is to assure coordination of the "multiple-uses" and "sustained-yield of products and services" of the National Forest System [16 U.S.C. 1604(e)(1)].

NFMA requires that the Secretary of Agriculture promulgate regulations for the development and maintenance of LRMPs. The planning regulations require:

1. Consistency of future decisions with LRMPs [36 CFR 219.10(e) and 219.12(k)];

2. Amendment [36 CFR 219.10(f)]; Interim Directive Amendment, and Revision January 13, 1986 (51 Fed. Reg. 1476), reissued February 13, 1987 (52 Fed. Reg. 4632); and

3. Revision of LRMPs [36 CFR 219.10(g)].

Monitoring and evaluation, amendments and revisions help to ensure that LRMPs maintain the dynamic nature required by Congress in NFMA. The decision to approve Amendment 14 to the San Juan National Forest's Land and Resource Management Plan (herein referred to as the Amended Forest Plan or Amended Plan) is made under the authority granted to the Regional Forester through the NFMA and the Act's implementing regulations at 36 CFR 219.4(b)(3) and 219.10(f).

II. THE ISSUES

Following the decisions by the Secretary of Agriculture and the Chief of the Forest Service, the Forest conducted additional public scoping to identify other issues to be addressed during the amendment process. The final set of major issues identified for this Amendment to the Forest's Land and Resource Management Plan are summarized below:

1. **Allowable Sale Quantity** - the maximum amount of timber the Forest should be allowed to harvest from 1992 to 1997.

2. **Economic Dependency and Diversity** - the effects that various timber harvest levels will have on local wood processing industries and local communities.

3. **Unroaded Areas** - whether these areas should be scheduled for timber harvesting before the Forest Plan is revised in 1997.

4. **Financial Efficiency of Timber Management** - the net cost to the Government of various timber harvest levels (often referred to as the "below-cost" timber sales issue).

5. **Timber Harvest Benefits** - whether timber harvesting generates quantifiable benefits to other resources such as wildlife habitat improvement, water yield increases, range improvement, and increases in recreation opportunities.

6. **Biodiversity** - the effects of timber harvest levels on genetic, species and community (plant or animal) diversity of the Forest.

7. **Old Growth** - the effects of timber harvest levels on the quality and quantity of old growth on the Forest.

8. **Visual Quality** - the effects of timber harvest levels on the scenery throughout the Forest, and the indirect effect on tourism and recreation use on the Forest.

9. **Recreation Opportunities** - the effects of timber harvest levels on the overall recreation opportunities on the Forest.

10. **Water Quality** - the effects of timber harvest activities on the quality of water coming from the Forest.

Chapter I and Appendix A of the FSEIS describe the issues in more detail. These issues formed the basis for developing the alternatives analyzed in the FSEIS with the exception of the Timber Harvest Benefits issue (See FSEIS, p. III-20).

III. DECISIONS

The decision made in this ROD is to approve Amendment Number 14 for the San Juan National Forest's (the Forest) Land and Resource Management Plan (the Amended Forest Plan). Alternative H5 in the FSEIS is the selected alternative. The implications this decision has on future management of the Forest are described in this Section. The rationale for this decision, including the alternatives considered, is explained in Section IV of this ROD.

Establishing a New Allowable Sale Quantity and Changing the Number of Acres Designated as Suited for Timber Production

This decision changes the ASQ established in the original Forest Plan from 413 million board feet (MMBF) to 240 MMBF for the 10-year period extending from September 1983 to September 1993.

Forest Planning Regulations (36 CFR 219.10(g)) state that forest plans shall ordinarily be revised on a 10-year cycle or at least every 15 years. ASQ is defined in the Planning Regulations (36 CFR 219.3) as the quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. The time period for the Amended Forest Plan is approximately 6 years (1992 through 1997). The maximum amount of timber volume the Forest can offer for sale during this time period is 144 MMBF (sixty percent of 240 MMBF). The Forest Plan will be revised in 1997 and the ASQ will be re-evaluated at that time.

The ASQ, if offered on an even schedule, will amount to an average of 24 MMBF per year. Harvesting may not occur on an even schedule; therefore, monitoring of ASQ accomplishment will be based on the total amount offered from April 1992 through September 1998.

The NFMA planning regulations at 36 CFR 219.3 define Allowable Sale Quantity as:

> "The quantity of timber that may be sold from an area of suitable land covered by the forest plan . . . . This quantity is usually expressed as the average annual allowable sale quantity."

The key phrase in this definition is "quantity of timber." Quantity is measured in board foot volume which will be used as a monitoring item to determine if the objectives of the Amended Forest Plan are being met.

The ASQ in the Amended Plan is based on live green trees. Dead timber removed in a commercial sale is chargeable against ASQ, if the timber was alive at the time of the determination of the ASQ. Personal use firewood is not a chargeable component of ASQ. Commercial firewood would be a chargeable component of ASQ if the product consisted of wood which was still living and contributed to the growing stock volume at the time of the inventory on which ASQ projections were based.

The Amended Forest Plan changes the number of acres designated as suited for timber production from 470,000 acres to 375,000 acres. The change in suited acres requires a change in Management Area designation for some of the acres. The location of the lands designated suited for timber production is shown on the maps included with the Amended Forest Plan.

The 68,950 acres previously designated as suited were located in Management Areas 7C and 7E, Wood Fiber Production and Utilization, and 9B, Increased Water Yield through Timber Harvest. In the Amended Plan, these same acres are designated to Management Area 2B (Rural and Roaded Natural Recreation); 3A (Semi-primitive Non-motorized Recreation); 4B (Wildlife Habitat Emphasis); and 6B (Livestock Grazing). All 68,950 acres are considered not suited for timber production.

The remaining 26,050 acres were located in various other multiple-use prescriptions. This decision does not change the management area designation on these 26,050 acres, but the acres are considered not suited for timber production in the Amended Plan. A summary of all the Management Area acreage changes is on page III-86 of the Amended Forest Plan.

Changing All Lands Designated as Management Area 9B

This decision changes the management emphasis for all lands currently allocated to Management Area 9B (Increasing Water Yield) to Management Area 3A (Semi-primitive Non-motorized Recreation) and Management Area 7E (Wood Fiber Production and Utilization). In the original Forest Plan, 38,740 acres were designated Management Area 9B. In this amendment, all 9B lands are designated as shown below:

2,800 acres to Management Area 2A, Semi-primitive Motorized Recreation
5,610 acres to Management Area 3A, Semi-primitive Non-motorized Recreation
2,490 acres to Management Area 4B, Wildlife Habitat Emphasis
27,840 acres to Management Area 7E, Wood Fiber Production and Utilization

All the acres in Management Area's 2A, 3A, and 4B (10,900 acres) are designated as not suited for timber production. These acres were designated suited for timber production in the original Plan.

Changing General Direction Goals and Management Standards and Guidelines to Emphasize Uneven-aged Timber Management Systems and Landscape Ecosystem Management

The Amended Forest Plan has additional goals to be used when developing silvicultural prescriptions. The goals focus on the landscape as the primary unit of analysis and require the identification of a desired future condition based on the landscape characteristics. The Amended Forest Plan changes portions of the Standards and Guidelines for Silviculture in the General (Forest-wide) Direction and for Management Area Prescriptions 2A, 2B, 3A, 4B, 5B, 6B, and 7E. The specific changes are too numerous to list in the ROD. Refer to the Amended Forest Plan (Plan, III-110); 2B (Plan, III-123); 3A (Plan, III-134); 4B (Plan, III-152); 5B (Plan, III-171); 6B (Plan, III-187); and 7E (Plan, III-217)(Forest Plan, pages III-35 through III-39) for details of the changes.

The Standard and Guideline changes, in general, emphasize the importance of establishing a desired future condition for management areas based on a landscape perspective. The primary goal whenever timber harvest is an objective, will be to create or maintain uneven-aged stands using individual tree and group selection regeneration (harvest) methods. This goal does not preclude the use of the clearcut or shelterwood method for creating even-aged stands. The actual method used is determined at the site-specific project level using the Standards and Guidelines in the Amended Forest Plan. These changes are specifically described in Chapter III of the Amended Forest Plan.

The primary regeneration methods in the original Forest Plan were the shelterwood and clearcutting. The primary method in the Amended Forest Plan is group selection. Annually, the approximate number of acres treated using each method will be:

Selection method - 4,500 acres
Shelterwood method - 500 acres
Clearcut/coppice method - 500 acres

The clearcut/coppice method will be applied to the aspen species type. Opportunities to apply selection methods to the aspen species type will be explored during the project planning process. Commercial thinning will occur on approximately 125 acres each year.

All of the mitigation measures discussed in Chapter IV of the FSEIS will apply to my decisions.

Changing the Monitoring Program to Include Additional Indicators of Changes in the Demand for Timber

This decision changes the Forest Plan Monitoring Program to include six additional indicators of changes in demand for live green sawtimber from the Forest. These additional indicators are:

1. Ratio of volume sold to volume offered
2. Ratio of volume harvested to the Allowable Sale Quantity
3. Amount of uncut-volume-under-contract
4. Economic efficiency of the timber program as reported in TSPIRS, Report 2

5. Stumpage bid prices
6. Stumpage harvest prices

Chapter IV of the Amended Forest Plan explains how these indicators are to be used.

IV. BASIS AND REASONS FOR MY DECISION

The Change in the Allowable Sale Quantity (ASQ) and Lands Designated as Suited for Timber Production

Many factors influenced the decision to change the ASQ from 410 MMBF to 240 MMBF and to change the lands designated as suited for timber production from 470,000 to 375,000 acres. The factors considered in changing the ASQ included:

- local timber demand;

- local economic dependency and diversity;

- the financial efficiency of timber management on the Forest;

- unroaded areas;

- errors in the original mapping of suited lands due to the lack of site specific information.

Local Timber Demand

The San Juan National Forest provides about 85 percent of the total timber supply for the local wood processing industries. Other local suppliers provide insignificant amounts of timber. Private landowners, the State of Colorado, Bureau of Land Management, and Southern Ute Tribe each sell about 0.5 to 1.0 MMBF per year to local processors. The amount of timber offered for sale by the Forest is particularly important to the local wood processing industry and the communities of Mancos, Dolores, and Pagosa Springs where industry employment is a key component of the local economy.

The timber demand analysis was updated since release of the DSEIS by incorporating timber sale data for 1987 through 1989. The analysis shows that the demand for timber has increased slightly. The timber industry is paying more for timber from the Forest than in the recent past (FSEIS, II-85, III-42).

Two additional factors have recently affected the local timber demand and supply relationship. First, a sawmilling operation in the Pagosa Springs area has upgraded milling capacity. Second, both the Jicarilla Apache and Southern Ute Tribes have increased their combined timber sale volumes to 10 MMBF during the past year. The short term market effects of these two actions are discussed in Chapter II of the FSEIS (p. II-87).

Analyses indicate that in the short-term:

- Local demand for sawtimber and other wood products will increase at a moderate rate.

- Other suppliers, such as the Southern Ute and Jicarilla Apache tribes, will continue to sell about 10 MMBF per year. Mill operators in New Mexico will have a competitive geographic advantage over Colorado purchasers when bidding for Jicarilla Apache Tribal timber sales.

- The Forest will continue to be the major supplier of timber in the area.

- Decisions regarding supplies of San Juan National Forest timber will be the major determinant of timber prices within the local area.

The relationship of the ASQ to timber demand is one of the primary factors considered in reaching this decision. The demand analysis demonstrated that timber supply and demand within the local area is a dynamic relationship which changes in response to "end- product" price fluctuations and a number of other variables (FSEIS, p. III-40). Because of this relationship, the alternatives were evaluated in terms of how they affected the current timber demand and supply equilibrium and the percentage of current harvest levels each alternatives supplies. Each alternative affects timber prices, other local timber suppliers, and the local wood processing industry in different ways.

Table 1 compares current estimates of timber demand with the demand projections in the FEIS accompanying the original 1983 Forest Plan. The "Current Quantity Demanded" is equivalent to the current amount harvested.

TABLE 1

Product		Current Quantity Demanded (MMBF/YR)	1983 FEIS Demand
Softwood Sawtimber		18.0	38.0
Aspen Sawtimber		6.0	10.0
Other Wood Products		0.5	10.0
	TOTAL	24.5	58.0

Based on comments received from the public on the DSEIS, the most acceptable range of harvest from the Forest is 13 MMBF to 30 MMBF annually. The original Forest Plan had an ASQ of 410 MMBF or an average annual offer of 41 MMBF. The current harvest level is about 23 MMBF per year. The Forest analyzed six ASQ levels ranging from 104 MMBF to 410 MMBF.

Analysis predicts that if timber sales from the Forest are increased beyond the current harvest level of 23 MMBF per year, timber (stumpage) prices will decrease and industry employment will increase. If timber sales increase from 23 MMBF to 41 MMBF per year, timber (stumpage) prices will drop by approximately $3 per thousand board feet (MBF) and total employment will increase by about 235 jobs. Conversely, if timber sales decrease to 10.4 MMBF per year, the demand analysis indicates that timber prices will increase by approximately $4 per MBF and employment will decrease by 170 jobs. The price variation between the highest and lowest alternative is $7 per MBF (approximately $12 in 1990 dollars). The employment variation between alternatives is about 400 jobs and is obviously important to the timber industry, their employees and the affected communities.

There have been two recent events which affect the timber supply and demand situation in southwestern Colorado. On August 24, 1989, the United States District Court for the District of Colorado placed an injunction on the Rio Grande National Forest's timber sale program (Citizens for Environmental Quality vs. Lyng, C.A. No. 87-F-1714). The injunction states that the Rio Grande cannot offer more than 25 MMBF of timber annually. Prior to the injunction, the Rio Grande had been selling approximately 34 MMBF annually. The Rio Grande offered the 25 MMBF in 1990 and 1991, and will offer 21.3 MMBF in 1992 and 18 MMBF in 1993. Bids on Rio Grande timber sales have recently been received from non-traditional purchasers from as far away as Espanola, New Mexico. Traditional purchasers of Rio Grande timber have been purchasing timber from other

National Forests in southwestern Colorado since the 1989 court injunction. All these changes in Rio Grande timber demand and supply are affecting the timber supply and demand relationships on the San Juan National Forest.

In 1991, The Grand Mesa, Uncompahgre and Gunnison National Forests amended their Forest Plan and reduced the conifer component of the ASQ from the original Forest Plan. This change is not a reduction from historical harvest levels, however, the new ASQ will not provide for recent demand increases and future growth in the timber industry. The new ASQ does contribute to maintaining current timber industry employment levels in southwestern Colorado. Traditional purchasers of Rio Grande timber have recently (since the 1989 injunction) bid on sales in the Gunnison National Forest. Since their is limited overlap between purchasers of GM/UNC/GUNN timber and San Juan timber, the change in ASQ on the GM/UNC/GUNN does not affect the timber supply and demand relationship on the San Juan.

The ASQ in the Amended Plan does not provide for timber industry expansion to respond to increases in timber demand. If demand continues to increase over the short term, as observed in 1990 and 1991, then timber prices could increase due to increased competition among purchasers. The ASQ will contribute to maintaining current local timber industry employment and income despite these effects on prices. All these events demonstrate the dynamic nature of the timber supply and demand relationships in southwestern Colorado. Due to this fact, the Forest will continue to monitor the timber supply and demand relationships as described in Chapter IV of the Amended Forest Plan.

Local Economic Dependency and Diversity

The local economies within the influence zone of the Forest are not based on a single industry, but, instead, on a diverse combination of industries. Many of these industries rely on the Forest for their livelihood. The Rocky Mountain Region is committed to a balanced program of multiple-use. Multiple-use management is consistent with the development and maintenance of a diverse economy, and economic diversity is a key ingredient to economic stability. The Amended Plan provides a reliable timber supply, but at a lower level than envisioned in the original Forest Plan. The Amended Plan helps to maintain the current economic diversity of local communities.

The Amended Forest Plan maintains personal income and tax revenues by providing for stable employment in the local wood processing industry. By holding timber sales at current levels, a potentially destabilizing situation is avoided and the stable economic condition of local communities over the past decade is maintained.

The effects of National Forest resource management on the daily lives of people is a major factor in this decision. An important part of the Forest Service mission is to manage the resources of the National Forests in an integrated manner and to ensure the long term sustainability of all renewable resources. The decision to approve the Amended Forest Plan will affect local communities. The nature of this effect is a concern shared by officials of the State of Colorado, county commissioners, and other local government officials. The primary issue is not only the effect on employment and income generated by the local wood processing industry. Other businesses and industries which contribute significantly to the well-being of the local communities must also be considered.

The cost of increasing timber sales, and thus employment, beyond current levels would exceed the benefits. The financial efficiency of the timber management program would decrease and would be inconsistent with the Region's goal to narrow the gap between costs and revenues. Increasing timber sales could also introduce a destabilizing factor to local economies if funding were subsequently reduced by Congress for Forests with "below-cost" timber sale programs. If the ASQ were reduced to a level below the level of current sales, the Forest would make more rapid progress towards reducing "below-cost" timber sales. Decreasing timber sale levels could also introduce a destabilizing factor by creating unemployment in the wood process-

ing industry. Such employment losses would be especially acute in the towns of Mancos, Dolores, and Pagosa Springs where the wood processing industry is a major employer.

The Amended Forest Plan contributes to local employment and economic diversity by maintaining jobs in the wood processing industry and allows for the maintenance and growth of the recreation-based sectors of the local economies.

Financial Efficiency of Timber Management

Over the past several years, the Forest has placed considerable emphasis on reducing costs of their timber management program and enhancing the revenues received from the sale of timber from the Forest (FSEIS, p. III-38; Appendix B, Section IX). The current organizational structure has been streamlined to effectively manage the 23 MMBF per year timber sale level of the past decade. Alternatives which provide for increases from the current timber sales level would require a different organizational structure and some cable logging, thus incurring higher costs for preparing and administering timber, and for road construction. Conversely, the alternatives with lower harvest levels would result in higher fixed costs in the short term.

Analysis of the local timber supply and demand situation projects that the price paid by local purchasers for National Forest timber should continue to rise in the future. Compared with Forest costs for the timber management program, the increase in timber prices should create a situation where revenues exceed costs in the near future. Based on these predictions, the Amended Forest Plan establishes a timber management program which should be financially efficient by the year 1994.

Unroaded Areas

In 1979, extensive areas of the Forest were already designated wilderness or were in wilderness study status. In addition, the Forest made recommendations on 24 roadless areas totalling 743,000 acres in the second Roadless Area Review and Evaluation (RARE II). A total of 76,843 RARE II acres on the San Juan National Forest were subsequently designated wilderness, and 90,100 additional acres designated wilderness study areas by the Colorado Wilderness Act of 1980 (P.L. 96-560). The Colorado Wilderness Act released the remaining acres of unroaded areas under consideration and directed that:

> "[a]reas . . . not designated as wilderness or for study by Congress or remaining in further planning . . . need not be managed for the purpose of protecting their suitability for wilderness designation pending revision of the initial plans."

Appendix F of the FSEIS provides a detailed description of each of the original "RARE II" areas.

The original Forest Plan provided for several management emphases on released roadless areas, including dispersed non-motorized recreation management for wildlife indicator species, range management, and management for wood fiber production. Two hundred thirty-nine thousand one hundred acres of the 572,000 acres of unroaded areas released by the 1980 Colorado Wilderness Act are designated as suited for timber production in the original Forest Plan.

Since 1980, the Forest has accessed, through new road construction, about 31,800 acres or approximately five percent of the unroaded areas released by the Colorado Wilderness Act. An additional 1,280 RARE II acres were exchanged with the Bureau of Land Management. Currently, unroaded areas on the Forest include the remaining 543,000 acres released by the Colorado Wilderness Act, 355,534 acres of wilderness, and 90,100 acres of wilderness study areas for a total of 989,634 acres forest-de (FSEIS, p. III-45). Approximately 53 percent of the Forest is unroaded. Each alternative considered during the amendment process has different impacts on the existing unroaded areas.

Some individuals and organizations disagree over management of unroaded areas on the Forest. Some feel that designating these areas as inappropriate for timber production is unnecessary and not justified. They see the land available for timber production decreasing as these areas are designated for uses that preclude development for timber production. Others feel that unroaded areas are dwindling as new roads are built in previously undeveloped areas, and all existing undeveloped areas should be retained for future generations.

The alternatives considered vary in the amount of unroaded areas designated as suited for timber production and in the amount of unroaded areas proposed for timber harvest in the next 6 years. The amount of unroaded areas designated as suited for timber production range from a low of 1,000 acres to a high of 239,000 acres (FSEIS, p. IV-64). Unroaded areas potentially impacted by timber sales over the next 7 years range from 1000 acres to 24,000 acres, and from 1000 acres to 207,000 acres over the next 5 decades. The percentage of timber volume that would be obtained from unroaded areas ranges from three percent to 48 percent.

The Amended Forest Plan maintains significant portions of the existing unroaded areas in their current condition. The Amended Forest Plan designates 104,000 acres of unroaded land as suited for timber production, or 28 percent of the total suited land base of the selected alternative. The original Forest Plan designated 239,000 acres of unroaded lands as suited for timber production.

The Amended Forest Plan will be revised in 1997. By that time, if the Plan is fully implemented, approximately 99 percent of the current unroaded acreage will remain intact. Of the 543,000 acres remaining of RARE II unroaded areas released by the 1980 Wilderness Act, 98 percent will remain in 1997. The Amended Forest Plan maintains future options for these areas and allows for consideration of their wilderness potential during the Forest Plan revision process.

For the reasons stated, the Amended Forest Plan, which reduces the ASQ from an average of 41 MMBF per year to 24 MMBF per year and reduces the acres designated as suited for timber production, maximizes net public benefits more than any of the other alternatives considered.

Errors Detected in the Original Mapping Process

The decision to change the location of some of the acres designated as suited for timber production is based entirely on errors detected in the original mapping process. During Plan implementation and in updating the Forest databases, the Forest found several areas mapped as suited, but which did not meet the criteria for suited lands in the Forest Plan. Also, there were areas mapped as not suited, but which did meet the criteria for suited lands in the Forest Plan. All these errors were due to incorrect mapping of the location of steep slopes (greater than 35 percent slope).

The Change in Management Area Designations

The decision to change some of the Management Area designations in the original Forest Plan is based on two factors; the reduction in lands designated suited for timber production and problems encountered during Forest Plan implementation in Management Area 9B.

Reduction in the Suited Land Base

The Amended Forest Plan reduces the Forest's suited land base by 95,000 acres. The reduction is due to the decrease in the ASQ from 410 MMBF to 240 MMBF. Since the ASQ is being reduced, fewer acres are needed in the suited land base. In the original Forest Plan, 68,950 acres of the 95,000 acres were in Management Areas 7C and 7E which emphasize wood fiber production and utilization. Since these acres are not scheduled for timber harvesting in the Amended Forest Plan, retaining these acres in a management area with a primary objective of wood fiber production is inappropriate. The management area designation on

these lands is changed in the Amended Forest Plan to management areas 2B, 3A, 4B, and 6B. These changes to individual areas, generally averaging 600 acres in size, are based on recommendations from the affected Ranger Districts and involved redesignating these areas to reflect current land uses and compatible uses on adjacent lands. In some cases, these areas appear within a 7E management area but are now not shown as suited for timber production.

Implementation Problems in Management Area 9B

Since the original Forest Plan was approved in 1983, the Forest has conducted analyses for three water augmentation projects in Management Area 9B. Designing these projects to meet the goals of Management Area 9B would have resulted in difficulties during implementation (1950 Project Files, Sheep Mountain, Eagle Creek, Barlow Creek). Hydrologic problems would have resulted by using the standards and guidelines for the 9B prescription; therefore, the 9B prescription is inappropriate for the San Juan National Forest.

The Amended Forest Plan changes the Management Area 9B lands (38,740 acres) to Management Areas 2A, 3A, 4B, and 7E, as presented in Section III of this ROD. Due to the reduction in the ASQ and the corresponding reduction in lands designated as suited for timber production, not all of the 9B areas remain in the suited land base. Ten thousand nine hundred acres are now designated in Management Areas 2A, 3A, and 4B and are designated not suited for timber production in the Amended Forest Plan. The remaining 27,840 acres of 9B lands are now in a 7E, Wood Fiber and Utilization, Management Area. These lands remain designated as suited for timber production and are needed to produce the ASQ.

Ranger Districts evaluated the existing 9B lands and recommended the most appropriate management areas they should be allocated to in the Amended Forest Plan. These recommendations are incorporated into the Amended Forest Plan.

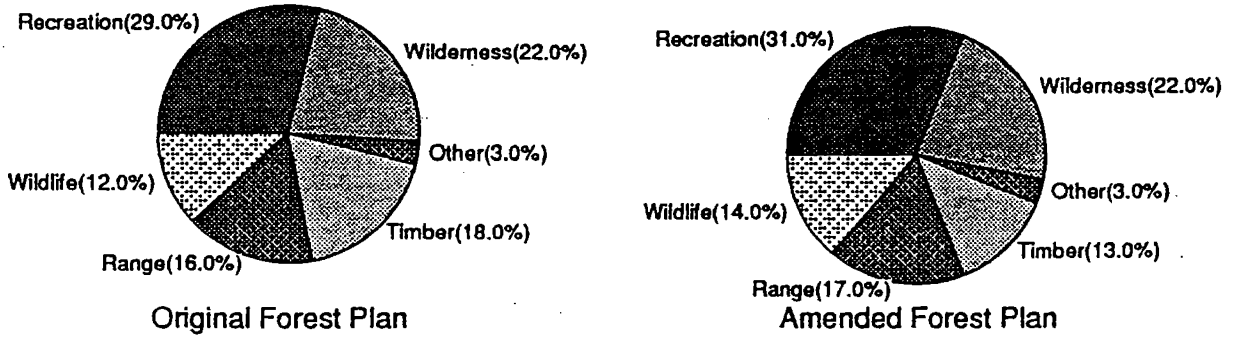
Figure 1 displays the differences in general management emphases created by the Amended Forest Plan. The charts illustrate the fact that there is an insignificant amount of change in management area allocations between the original Forest Plan and the Amended Forest Plan.

Figure 1

Management Emphases

Original and Amended Forest Plan

(Measured in Percent of Forest Acres)



The Change in General Direction Goals and Management Standards and Guidelines

The Amended Forest Plan has different standards and guidelines for silviculture than the original Forest Plan and places more emphasis on uneven-aged timber management and landscape ecosystem management. The main reason for the decision to change the standards and guidelines is to meet the desires of the public who commented on the Proposed Forest Plan Amendment and DSEIS. The change in regeneration (harvest) methods reflects concerns for achieving natural regeneration, maintaining continuous forest cover and wildlife habitat, and maintaining the level of recreational and amenity values.

The Forest received 187 letters with comments from the public in response to the DSEIS and Proposed Plan Amendment. Many people commented on the importance of maintaining the visual quality of the Forest and of the natural-appearing landscapes. Landscapes seen from areas that are heavily used by the public, such as roads, rivers, or developed recreation sites, are more sensitive than other areas because scenic quality may significantly affect recreational experiences of those viewing the landscape.

Timber harvest activities, including road construction, can change visual quality. Many people find changes in the natural settings objectionable and feel that most or all scenic areas should be maintained in a natural-appearing state. Local residents have stressed that the quality of the Forest's scenic resources is important to the economic well being of their communities. Some people believe that visual quality effects are temporary and should be of less concern when planning timber activities (FSEIS, pp. VI-86 to VI-100).

Alternatives that emphasize even-aged management systems have more potential to change the natural-appearing landscape compared to other systems. In the alternatives considered, the area of commercial timber harvest ranges from 2,100 to 11,000 acres per year, and the percentage of area treated using uneven-aged management systems varies from 5 percent to 78 percent in the alternatives.

A major factor in selecting Alternative H5 as the Amended Forest Plan is the emphasis placed on maintaining scenic quality while meeting recent timber demand. Uneven-aged management systems will be used in place of even-aged management systems on the majority of the Forest's suited timber lands. This change will increase the emphasis on maintaining natural appearing landscapes with continuous forest cover. The environmental effects of a change to uneven-aged management are discussed on pages IV-11, 19, 20, 21, 24, 29, 32, and 33 of the FSEIS.

The Change in the Forest Monitoring Program

The Secretary's Decision asks for an explanation of how the Forest would respond to changes in timber demand. The Forest developed a process for estimating local timber demand and for monitoring various market indicators in order to detect, or even predict, changes in demand. The original Forest Plan provided no mechanism for monitoring timber demand and, therefore, no means of detecting changes in that demand. From the timber demand study, the Forest gained considerable knowledge of the timber demand and supply relationships in the area affected by the Forest. Chapter IV in the Amended Forest Plan includes additional items for monitoring timber demand that were identified during this process.

OTHER ISSUES CONSIDERED

Maintenance and Distribution of Old-Growth

The future of old-growth on the Forest is an issue that has gained widespread public interest. Many individuals value old-growth areas for maintenance of diversity and site productivity, protection of watersheds, and for aesthetic and recreational purposes.

The facets of this issue, as framed by public comment, include the trade-offs between conserving old-growth to the benefit of wildlife, biological diversity, and aesthetic values, or continuing timber harvest to support timber demand. The issue is complicated by the lack of a widely accepted definition of old-growth. Perceptions of old-growth are described in biological terms by some and spiritual terms by others.

Many of those who commented on the DSEIS and Proposed Amendment are concerned that the cumulative effects of 80 years of timber harvesting on the Forest has resulted in a scarcity of old-growth for certain tree species. They are concerned with the criteria used in the DSEIS to describe and analyze the amount and distribution of old-growth. The Forest based the old-growth definitions upon age criteria, due to limitations in the existing inventory information. The acreages in the DSEIS were approximations, but serve to portray the relative abundance of timber stands with an average age over 150 years, for most species. Recent monitoring has shown that a 150-year average-age class is an appropriate indicator of old growth characteristics on the Forest.

In all the alternatives considered, the amount of old-growth will increase from the current 450,000 acres, but at a slower rate than if the Forest were allowed to change without human influence. Under the Amended Forest Plan, about 75 percent of the current old-growth is designated as not suited for timber production and is not scheduled for timber harvesting. If the Amended Forest Plan is fully implemented, the Forest will have approximately 725,000 acres of old-growth after 5 decades, of which 58,000 will be ponderosa pine. This is a 55 percent increase in acreage of old-growth from the current situation.

The Forest is currently working with the public to conduct a comprehensive inventory of ponderosa pine old-growth as described in Section II of this ROD. This inventory is essential to determine management options that will provide for the many significant values associated with old-growth. This information along with recently initiated inventories for the other species present on the Forest will help refine management objectives, standards and guidelines, and desired future condition for old-growth. The location of old-growth for each tree species between suitable and unsuitable timber lands should adequately preserve representative old-growth on the Forest in the future. Old growth concerns will be addressed during project level NEPA analysis where appropriate.

Biological Diversity

The biological diversity issue reflects increasing concerns over the viability of indigenous species, reductions in the genetic richness within species, simplification of complex ecosystems, and the environmental, social, and economic impacts of such changes in the ecosystem. Comments received on the DSEIS indicate a need to carefully balance biological and social considerations.

While nature is constantly changing the diversity of an area, the demands of growing human populations mean that choices must continually be made - choices about what parts and processes of the variety of life should have highest priority for conservation and how to blend their perpetuation with other socially desirable goals. The National Forest Management Act of 1976 provides statutory direction for managing the National Forest System to "provide for diversity of plant and animal communities . . . in order to meet overall multiple-use objectives." Other statutes and regulations guide Forest Service programs that address specific parts of overall multiple-use objectives, such as threatened and endangered species, sensitive plants, fish, wildlife, productive forests, rangelands, and wetlands.

The original Forest Plan emphasized relatively small disturbances, widely distributed, to provide extensive edge habitat for dependent species. This has been advantageous to certain species; however, the approach may not have served adequately to protect and enhance habitat for all types of species. Current research is evaluating the appropriate sizes of treatments to enhance habitat for some species, while preventing fragmentation that could jeopardize other species. As new information is available, the Forest will adjust any practices that could interfere with sustaining viable populations of any plant or animal species.

In order to maintain or improve the overall biological diversity, the Forest will:

1. Continue the aspen management program which is resulting in healthy and vigorous aspen stands.

2. Continue an intensive old-growth inventory process, refining management objectives and desired future conditions for ponderosa pine and mixed conifer old-growth on the Forest.

3. Continue to inventory riparian areas to determine the condition and trend of riparian habitats. The inventory results will be used for monitoring and for developing an action plan that will allow for improved coordination of all management activities, to assure enhancement of the riparian habitats.

4. Emphasize uneven-aged management in conifer tree species, thereby maintaining the natural-appearing landscapes within the Forest.

5. Continue to examine cumulative effects in sensitive areas to assure that management activities result in minimal adverse effects to the ecosystems.

6. Maintain large, contiguous, non-wilderness portions of the Forest as unroaded, with little to no timber harvesting.

7. Continue to provide for the conservation of threatened and endangered species.

The biological diversity issue will be addressed during project level NEPA analysis as appropriate.

Recreation Opportunities

Currently, the Forest provides a wide variety of recreational opportunities. The Forest receives close to two million visitor days per year. Approximately 37 percent of the use is at developed sites, 57 percent is dispersed recreation activity, and 6 percent occurs in wilderness (FSEIS, p. III-21).

People are interested in maintaining a wide variety of options for recreation activities and there is concern about how the Amended Forest Plan affects these opportunities. One concern involves the potential negative effect of timber sales on dispersed non-motorized recreation and tourism. Other people are concerned that placing increased emphasis on non-motorized recreation may result in reduced timber sales which may affect the economic stability of nearby communities.

Each of the alternatives considered provides for an abundance of diverse recreation experiences, and the effects on recreation opportunities was not a major factor in the decision to approve the Amended Forest Plan. After considering public comment and the alternatives, the Amended Forest Plan maintains an appropriate diversity of recreation opportunities. The Forest will have capacity for approximately 3.8 million recreation visitor days in motorized settings and 1.4 million in nonmotorized settings after 5 decades. This capacity is higher than the original Plan provided and exceeds demand by about 3.2 million visitor days per year.

Transportation management is important from the standpoint of recreation and wildlife habitat management. Logging roads will be closed following timber harvesting unless project environmental analysis demonstrates that continued road use is consistent with other planned management objectives. These closures are used to maintain the same approximate balance of motorized and non-motorized recreation opportunities. Logging and recreation conflicts will be minimized by assigning appropriate visual quality objectives to certain areas and protecting the experience of the trail user.

Water Quality

Water flowing from the Forest is of high quality and provides many benefits. The Forest furnishes water for municipal and domestic uses, irrigation, and recreation. Water provides fish and wildlife habitat, and supports a highly productive environment.

Some respondents to the DSEIS and Proposed Amendment expressed concern over the maintenance of water quality and the determination of cumulative effects on watersheds. Some concerned individuals questioned the adequacy of the analytical model (HYSED) which the Forest used for the DSEIS to predict effects of management activities on individual watersheds.

In response to public concern, the Forest hydrologist conducted an extensive analysis of each of the ten watersheds identified in the DSEIS as exceeding the threshold limits of the HYSED model. The hydrologist developed a new HYSED model with more detailed watershed information. The hydrologist screened some of the critical watersheds using a more comprehensive cumulative effects model developed specifically to reflect the site specific conditions and cumulative effects of projects on the Forest. This analysis identified five watersheds as critical (FSEIS, p.IV-14). These critical watersheds will require more rigorous cumulative effects analysis before projects that affect hydrologic conditions are implemented.

For any ground disturbing project, Forest specialists carefully analyze the projected site-specific effects of the disturbance and determine whether the effects can be mitigated. Specialists consider problem areas such as bank erosion; the probability of slope failures, and the proximity of proposed activities to the drainage system, riparian areas, or wetlands. If any project cannot meet, through mitigation, the Forest Plan standards and guidelines, the project will not be approved and implemented.

None of the alternatives considered would have degraded water quality; therefore, this issue was not a major factor in the decision to approve the Amended Forest Plan.

V. RESPONSE TO POINTS RAISED IN THE SECRETARY'S DECISION TO REMAND THE ORIGINAL FOREST PLAN

The Secretary's decision letter of July 31, 1985, raises certain points that must be addressed in this Record of Decision. The language used in the Decision is quoted verbatim.

USDA Decision Letter

> **"Where, as is the situation on the San Juan and GMUG** (Grand Mesa, Uncompahgre, and Gunnison National Forests)**, the selected alternative authorizes an expansion of timber sales, and the projections are for costs to exceed revenues for the entire planning horizon, a considerable greater burden is imposed on the Forest Service to provide even greater detail as on the rationale for, and specific benefits that will be achieved from such a continuation and expansion."** (USDA letter, p. 6)

Response

> The Amended Forest Plan does not propose an expansion of timber sales from the San Juan National Forest. The average amount of timber sold and harvested from the Forest for the past 10 years is 25 MMBF annually. The Amended Forest Plan, if fully implemented, will offer 24 MMBF annually. The economic projections for the timber management program under the Amended Forest Plan indicate

that the program should have revenues which equal or exceed costs by 1994. A detailed discussion explaining why the Amended Forest Plan maximizes net public benefits is in Section IV of this ROD.

USDA Decision Letter

"..., an explanation is needed as to why increasing the dependency of local community mill capacity and jobs which could result from an increase in sales of National Forest timber with revenues exceeding costs, will contribute to greater national or local welfare; especially since increased dependency upon submarginal timber sales would seem to result in potentially greater community instability due to uncertainties over continuation of a relatively high level of Federal funding to support a timber program with costs greater than revenues. The ROD should address this question."

Response

The Secretary's concerns grew directly from the original Forest Plan's objective to "expand" timber sales by 70 percent from current levels. The increased supply may have resulted in rapidly expanded manufacturing capacity and employment. If sales remained "below-cost," and funding were to be reduced for "below-cost programs," the original Forest Plan ASQ could have created a potentially unstable economic situation for local communities.

The Amended Plan changes the ASQ to the average volume sold from the Forest over the past 10 years. This ASQ change is not an increase above recent levels, therefore, the concerns in the Secretary's Decision are moot. The analysis projects that the timber management program on the Forest should become financially efficient within 3 years, therefore, the issue of "below-cost sales" is also moot. For these reasons, the Amended Plan will not increase the dependency of local wood processing industries on National Forest timber provided through a "below-cost" timber sale program.

USDA Decision Letter

"Is the timber program as currently proposed actually the most cost effective way to achieve the non-timber multiple use objectives of the plan?" (p. 8)

"Are the non-timber multiple use benefits to be achieved through the timber program really needed? Do projections of demand for these non-timber objectives support the need for the Federal expenditure required to achieve them? What are the high-level non-timber and amenity benefits that would be lost and who would be affected by the change and in what ways?"(p. 9)

"Are there other ways to accomplish vegetation management more cost effectively than through a timber program as currently proposed? The Forest Service has been exploring the use of prescribed fire for this purpose in Colorado. Does this technology, used in conjunction with timber sales where economically efficient, hold promise to reduce the cost of vegetation management?" (USDA letter, pp. 8-9)

Response

The Forest evaluated the relationship between timber harvest activities and the effect these activities have on other resources. Results of this analysis indicate that other resource benefits cannot be measured or quantified within an acceptable degree of reliability. The Forest determined that the demand for non-timber resources can be met without consideration of any non-timber benefits generated from the timber management program.

Alternative methods of accomplishing non-timber multiple use objectives are examined in the FSEIS (pp. B-36 to B-39). Alternative methods considered to produce non-timber benefits include prescribed fire, cut and leave, and chemical treatments. Some of these methods are used by the Forest to accomplish Forest Plan objectives for wildlife habitat improvement, reforestation, and insect and disease control. These methods cannot meet the objective of providing wood fiber for the local wood processing industry. Alternative methods for accomplishing vegetation management objectives are used by the Forest except when the objective is the production of wood fiber for supplying the local dependent timber industry.

Water is the only resource benefit quantified and valued in the analysis for the Amended Forest Plan. Increased water yield has a significant effect in the calculation of benefit-cost ratios for each alternative considered (FSEIS, pp. II-42 and II-44). Revenue-cost ratios and present net value calculations do not include water values.

The valuation of water is a matter of debate. Estimates of the amounts of water produced as a result of timber harvest in certain areas of the Forest and the value of that water are conservative. The analysis process used to determine the economic value of increased water yields is explained in Appendix B of the FSEIS at pages B-40 through B-41.

The Amended Forest Plan does not rely on the timber management program to produce other resource benefits in order to meet the demand for these resources. Due to this fact, the points raised in the Secretary's Decision in this regard are moot.

USDA Decision Letter

"To what extent can timber program costs be cut and/or revenues be enhanced while still providing an appropriate level of non-timber multiple use objectives?" (p. 8)

"The ROD and other planning documents should also include a discussion of, or a reference to, the steps that will be taken to reduce timber costs and/or enhance revenues while meeting appropriate multiple use objectives and dependency needs of local communities. The effect that such steps, if successful, would have on improving the economic efficiency of the timber program should be evaluated and explained." (p. 10)

Response

This issue was a principal point in the appeals of the Forest Plan by the Natural Resources Defense Council, and the concern of many respondents to the 1989 DSEIS. For the past decade, the Forest Service has concentrated on ways to improve the financial efficiency of timber management. Numerous recommendations have come out of the Productivity Improvement Team (PIT) reports (various publications 1983-1985), the National Administrative Review, Timber Sales Chapter (NAR 1984), and The Analysis of Costs and Revenues ... of Four National Forests (1986). Most recently, in a continuing effort to improve the financial efficiency of timber management, the Forest adopted several recommendations from these reports. The results of these efforts are discussed in detail in the FSEIS (Appendix B, pp. B-147 to B-159).

The suitability analysis (for timber production) conducted for this amendment will result in a more efficient timber management program. In this process, lands were identified that require excessive costs to access. Most of these areas were designated as not suited for timber production in the Amended Plan for this reason.

The Forest has focused efforts to reduce costs in the following areas of the timber management program:

- Organizational structure
- Timber sale preparation and administration
- Identifying the most financially efficient timber lands
- Road construction and reconstruction requirements
- Road costs per mile
- Silvicultural practices
- Reforestation

The factors which have the greatest effect on timber revenues are:

- Amount of uncut-volume-under-contract and timber sale schedules
- Conversion costs of manufacturing wood products from standing timber
- Timber sale location and design
- Silvicultural practices
- Contractual requirements

The Forest is monitoring these factors in order to increase revenues from the sale of timber from the Forest. The Forest is also using Value Analysis techniques on proposed timber sales.

The Forest has implemented cost reduction measures such as workforce reductions, reduced road construction, and revised timber contractual requirements. The Forest has also affected the price received for National Forest timber by controlling the amount of uncut volume under contract and providing timber sales which promote bid competition.

By 1994, if price trends continue as depicted the Forest should achieve a financially efficient timber program. Although there appears to be limited opportunity for additional cost savings, the Forest Supervisor will continue to explore additional measures. Changes made to reduce costs or increase revenues of the Forest's timber program are administrative decisions which do not require amendment of the Forest Plan and are not a part of the decision to approve the Amended Forest Plan.

USDA Decision Letter

"The Chief is directed to ensure that the planning documents provide complete and adequate information concerning the economic implications of the various alternatives and that the ROD's clearly explain why the selected alternative for each Forest is felt to maximize net public benefits." (p. 10)

Response

The economic implications of the alternatives considered are discussed in detail throughout the FSEIS. Chapter II, pages II-32 to II-45, explains the differences in economic and financial efficiencies among the alternatives considered. Effects on government cash flows, revenues, budgets, employment, personal income, payments to counties, and social effects are discussed and explained. Chapter IV of the FSEIS (pp. IV-33 to IV-41) contains discussions of the economic consequences of the alternatives considered.

Section IV of this ROD explains the reasons why the selected alternative, Alternative H5, maximizes net public benefits.

USDA Decision Letter

"The Chief's decision for the San Juan directs the Regional Forester to supplement the record with information on timber demand projections in the area. By this decision the Regional Forester is also directed to discuss in the planning records the circumstances under which increased demands (and presumable increases in timber prices associated with those increased demands) would lead to increases in timber sales offerings during the plan period. The effect of projected price increases on economic efficiency and decisions to increase timber sale levels should be discussed as well." (p. 10)

Response

The timber demand study developed for the original Forest Plan has been updated. The results of the update are summarized in Chapter III of the FSEIS, pages 40-44, and the detailed report is included in Appendix B, Section XI. Based on the updated timber demand study, increasing the ASQ above the level in the Amended Forest Plan could decrease the financial efficiency of the Forest's timber management program.

Before future increases in the ASQ are considered based on changes in demand, the Forest's monitoring and evaluation must demonstrate, based on current and expected timber revenues, that the increase in ASQ would continue the positive trend towards increased financial efficiency of the timber management program. Because the Amended Forest Plan does not increase the ASQ above current levels, price changes will be controlled by changes in local and national timber demand or by the supply decisions of other local timber producers. The Amended Plan includes monitoring requirements for timber demand. The indicators the Forest Supervisor will monitor are included in Chapter IV of the Amended Forest Plan. Future change in the ASQ must be developed through the Forest Planning amendment process using NEPA procedures and guidelines.

USDA Decision Letter

"The Chief then directs the Regional Forester to supplement the FEIS with the appropriate reference to the existence of the Stage II analysis in the planning records . . . . The Forests should discuss the results and implications of this economic analysis in a way that is meaningful to the public and should describe in the planning records how this information was used in the formulation of alternatives, in the development and selection of prescriptions to be applied to specific lands for timber management." (pp. 10-11)

Response

Stage II analysis is a financial efficiency analysis of timber harvest prescriptions required by the NFMA planning regulations at 36 CFR 219.14(b). The analysis was completed during the amendment process and the results are summarized in Chapter III of the FSEIS, pages III-35 to III-37. The full report on the analysis is in Appendix B of the FSEIS, Section X. The Appendix discusses the results in detail, the implications of the analysis, how the results were used in formulating the alternatives, and the effect on the choice of timber management prescriptions in the final Amended Plan. There is also a discussion of the relationship between timber management prescriptions and financial efficiency in Chapter II, FSEIS, pages II-40 to II-43.

VI. DECISION PROCESS

Public Involvement

The public involvement process for this amendment was initiated following publication of the Notice of Intent in August 1987. Joint discussions with individuals and groups interested in the management of the Forest were held from June through October 1988. The goals of the joint discussions were to reduce polarization, reach a common understanding of the publics views, and to define the issues. Participants in this process included representatives of the Colorado Environmental Coalition, Colorado Mountain Club, Audubon Society, Weminuche Chapter of the Sierra Club, Sheep Mountain Alliance, Colorado Timber Purchasers Association, Intermountain Forest Industries Association, Western Excelsior, Inc., Ponderosa Timber, Inc., and Stone Forest Industries, Inc. The National Forest Products Association joined in initial meetings. Representatives of the Natural Resources Defense Council were invited to attend but did not become involved in these discussions.

The DSEIS and the Proposed Forest Plan Amendment were distributed for a formal public review period of 90 days, ending March 15, 1990. A total of 187 letters of comment were received. During the review period and while revising the documents, Forest staff met with the public to discuss their comments and concerns about the Proposed Amendment. All the public comments received were considered and the Forest's response to the comments is documented in Chapter VI of the FSEIS.

The final Amended Forest Plan and FSEIS reflect the attempt to address and incorporate all the comments received. Although not all interested reviewers will agree with all aspects of the Amended Plan, all comments were considered and the review served to strengthen and improve the documents and the final direction for timber management on the Forest.

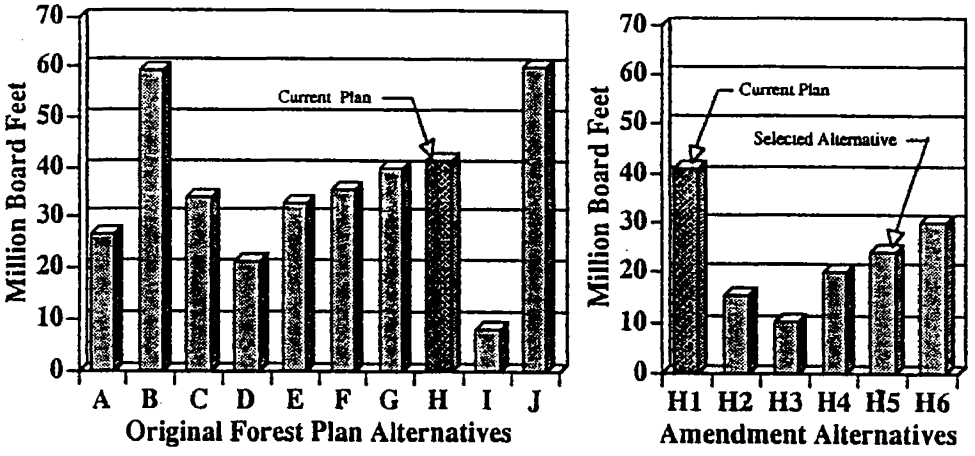
Alternatives Considered

The Forest ID team formulated six alternatives to respond to the issues identified during public scoping for the amendment. In response to public comments, the team changed several of the alternatives presented in the Draft Supplement to the EIS (FSEIS, p. II-3). Each alternative addresses public issues and management concerns in different ways. Taken as a group, the alternatives provide a wide range of outputs and produce a corresponding range of environmental impacts.

Figure 2 displays all the alternatives from the original Forest Plan by ASQ level. The Regional Forester in 1983 chose Alternative H1 as the Forest Plan. Five of the six alternatives (H2 - H6) described in the FSEIS represent a change in the timber management program established in the original Forest Plan. The alternatives were developed to respond to the issues discussed in Chapter I of the FSEIS and summarized in Section II of this ROD.

Figure 2

Allowable Sale Quantities (ASQ)
by Alternative



Alternative H1

This Alternative is the "no action" alternative required by the NEPA and the "current management direction" alternative required by the NFMA. The alternative represents the current ASQ of 410 MMBF (41 MMBF per year) and a suited land base of 470,000 acres. Eighty percent of the stands are treated using even-aged regeneration methods, mainly shelterwood, on 11,000 acres annually. Management Area 9B is retained. Forty-seven timber sales would be offered in the next 10 years within unroaded areas affecting 29,000 acres. A more detailed description of Alternative H1 is in the FSEIS, pages II-11 to II-13.

Alternative H1 was not selected due to the lack of demonstrated demand for an ASQ level of 410 MMBF and the effect on the desired future condition of the Forest from even-aged silviculture. The effect on sensitive unroaded areas also influenced the decision to reject the Alternative (FSEIS, p. IV-64). For these reasons, Alternative H1, the original Forest Plan, does not maximize net public benefits.

Alternative H2

Alternative H2 represents a financially efficient timber management program including both fixed and variable costs. The ASQ is 152 MMBF (15.2 MMBF per year) and a suited land base of 216,000 acres. Ninety percent of the stands are treated using even-aged regeneration methods, primarily shelterwood, on 3,200 acres annually. Management Area 9B lands are allocated to other management areas and designated not suited for timber production. Ten timber sales would be offered in the first decade within unroaded areas thereby affecting 10,000 acres. A more detailed description of the Alternative can be found in the FSEIS, pages II-14 to II-16.

The ASQ for Alternative H2 is approximately 35 percent lower than the projected timber quantity demanded from the Forest for the 7 years beginning in 1991, and is also 34 percent lower than the amount of timber which was sold from the Forest between 1980 and 1990. The ASQ in Alternative H2 represents a 62 percent reduction in the ASQ established in the original Forest Plan.

Alternative H2 was not selected because of the negative impacts to employment in the local wood processing industry (FSEIS, p. IV-40). This alternative does not maximize net public benefits because of this adverse effect on local communities. Since Alternative H5, the selected alternative, is predicted to have a financially efficient timber program by 1994 and will maintain current levels of employment in the local wood processing

industry, there was no need to select Alternative H2 in order to achieve a financially efficient timber management program.

Alternative H3

Alternative H3 maximizes financial returns from timber harvesting in roaded areas of the Forest while deferring timber harvesting in unroaded areas. The ASQ is 104 MMBF (10.4 MMBF per year) and a suited land base of 177,000 acres. Seventy-five percent of the acres are treated using even-aged regeneration methods, primarily shelterwood, on 2,100 acres annually. Management Area 9B is eliminated and the lands designated not suited for timber production. There are 1,000 acres within unroaded areas that are designated suited for timber production. One timber sale is scheduled in these unroaded areas but, after 1993, no additional areas would be affected. A more detailed description of the Alternative is in the FSEIS, pages II-17 to II-19.

The ASQ for Alternative H3 is approximately 45 percent of the projected timber demand from the Forest for the seven years beginning in 1991. The volume level is 55 percent less than the amount of timber sold from the Forest between 1980 and 1990, and represents a 75 percent decline in the planned ASQ established in the original Forest Plan.

Alternative H3 was not selected because of the negative impacts employment in the local wood processing industry (FSEIS, p. IV-40). The alternative does not maximize net public benefits because of these effects.

Alternative H4

In contrast to Alternatives H2 and H3, which maximize financial efficiency under different operational constraints, Alternative H4 is designed to provide the largest net *economic* return from the timber management program. The Alternative has an ASQ of 200 MMBF (20 MMBF per year) and the suited land base is 246,000 acres. Specific objectives are established on the proportion of tree species harvested and the regeneration methods used. Ninety percent of the acres are treated using even-aged regeneration methods, primarily shelterwood, or about 4,000 acres annually. Management Area 9B lands are allocated to other management areas and designated not suited for timber production. Twelve timber sales would be offered in the next 10 years within unroaded areas affecting 11,000 acres. A more detailed description of the Alternative is in the FSEIS, pages II-20 to II-23.

The ASQ for Alternative H4 is about 85 percent of the projected timber quantity demand from the Forest for the 7 years beginning in 1991. This volume level is 85 percent of the amount of timber sold from the National Forest between 1980 and 1990, and is a 50 percent reduction from the ASQ established in the original Forest Plan.

Alternative H4 was not selected because of the negative impact on employment in the local wood processing industry (FSEIS, p. IV-40) and the effect on the desired future condition of the Forest from the use of even-aged regeneration methods. The alternative does not maximize net public benefits because of these adverse effects.

Alternative H5

Alternative H5 is the alternative selected as the Amended Forest Plan. The description of the Alternative can be found in the FSEIS, pages II-7 to II-10, and in the Amended Forest Plan. The reasons for selecting the alternative are discussed in Section IV of this ROD.

Alternative H6

Alternative H6 was formulated in response to the wood processing industries anticipation that local demand for timber would increase in the near future. Alternative H6 has an ASQ of 300 MMBF (30 MMBF per year) and a suited land base of 395,000 acres. The primary regeneration method is group selection on 4,950 acres annually. Management Area 9B lands are allocated to other management areas but remain designated as suited for timber production. Twenty-eight timber sales would be offered in unroaded areas affecting 20,000 acres.

Based on the Forests timber demand study, the ASQ for this Alternative is 60 MMBF greater than the quantity demanded from the Forest. The ASQ level is 30 percent higher than the amount of timber sold from the Forest between 1980 and 1990.

Alternative H6 was not selected because it would substantially decrease the financial efficiency of the timber management program. There is strong public resistance to development of unroaded areas through road construction to harvest timber that is "below cost." This fact would make implementation of this Alternative unpredictable, unreliable, and expensive. The alternative does not maximize net public benefits because of this effect.

Alternatives with Higher Present Net Values than the Selected Alternative

Present net value (PNV) is used to measure the financial and economic efficiency of each alternative. PNV is a quantitative measure calculated using priced benefits minus the costs for the 150-year planning period and discounted to the present (reference Glossary, Chapter II, FSEIS). PNV does not measure the qualitative benefits and costs of the effects of each alternative on ecosystems, biological diversity, wildlife habitat, water quality, scenic quality, and local employment and income. PNV is not the only decision criteria used in the selection of alternatives during the amendment process.

The selected Alternative (H5) has a negative PNV of -$3.3 million. Alternatives H2, H3 and H4 have a higher PNV than Alternative H5. Table 2 displays all these Alternatives together with the ASQ, PNV, revenue/cost ratio, and benefit cost ratio.

TABLE 2

(financial evaluation)				(economic evaluation)		
Alternative	ASQ	PNV (MM$)	R:C Ratio	Alternative	PNV (MM$)	B:C Ratio
H2	15.2	0.0	1.00	H4	2.5	1.16
H3	10.4	-0.3	0.96	H2	1.8	1.14
H4	20.5	-0.7	0.96	H3	0.6	1.07
H5	24.0	-3.3	0.81	H5	-1.7	0.90

There is a close relationship between the ASQ level of each Alternative and the PNV calculation. In the financial evaluation, as the ASQ increases beyond 152 MMBF, the PNV decreases. In the economic evaluation, as the ASQ increases beyond 200 MMBF, the PNV decreases. This is due primarily to the additional costs incurred to access more timber sales in unroaded areas in order to reach higher ASQ levels. The FSEIS discusses in more detail the factors that lead to PNV differences between the alternatives (FSEIS p. II-38 to II-45).

The reasons why the Alternatives with higher PNV's, Alternatives H2, H3 and H4, were not selected over Alternative H5 are explained in Section IV.

Environmentally Preferred Alternative

The environmentally preferred alternative is the alternative causing the least impact to the biological and physical environment and the alternative provides the maximum protection and enhancement of historic, cultural, and natural resources (CEQ, FR18028, 3/23/81).

Alternative H3 is the environmentally preferred alternative. This Alternative would require the least amount of timber harvest and associated road construction consequently, the Alternative would have the fewest adverse effects on the biological and physical environment (FSEIS, Chapter III and IV).

Although Alternative H3 is preferable for the physical and biological environment, the Alternative would have adverse impacts on the local economy. Alternative H5, the selected alternative, provides for a better balance of resource uses and maximizes net public benefits while protecting the environment. Alternative H5 incorporates appropriate environmental safeguards to reduce potential adverse effects to the biological and physical environment. Alternative H5 maintains management options for many of the unroaded areas on the Forest, thereby, allowing the Forest to respond to many of the issues addressed in Alternative H3. Evaluation of the old growth situation on the Forest will allow the Forest to adapt and incorporate new scientific findings over the next seven years without reducing the supply of timber below recent demand levels. A decrease in timber supply from the Forest will, most likely, reduce local employment and income.

Use of the Supplement to the Original Forest Plan EIS

In making this decision, the information and analysis results presented in the Supplement to the Forest Plan Environmental Impact Statement was an integral part of the deliberation process. The final set of alternatives considered were within the range established in the Draft Supplement. The environmental effects of the alternatives described in the FSEIS were used in making this decision.

Compliance and Compatibility

The Forest Supervisor developed the Amended Forest Plan in compliance with the National Forest Management Act and the National Environmental Protection Act. The Amended Plan is in compliance with the Endangered Species Act as there will be no adverse effects on any threatened or endangered species (FSEIS, p. IV-60). The National Fish and Wildlife Service has reviewed the documents and notified us that consultation is not necessary or appropriate (FSEIS, p. VI-106).

No significant adverse effects will occur to cultural resources, therefore, the Amended Plan is in compliance with the National Historic Preservation Act. Archeologists will conduct inventories prior to any surface disturbance and all sites will be protected through mitigation or avoidance (Amended Forest Plan, p. III-15).

The Amended Forest Plan is in compliance with all Federal and State water and air quality standards, including the Clean Water Acts of 1972, 1977 and 1987.

The Forest developed the Amended Forest Plan with the involvement, coordination, and comments from other Federal, State, and local government agencies including the U. S. Fish and Wildlife Service; U. S. Environmental Protection Agency; Colorado Division of Wildlife; Colorado Department of Natural Resources; Archuleta, Hinsdale, La Plata, and Montezuma Counties; and the Cities of Durango, Dolores and Telluride. The Amended Plan is not in conflict with the goals of other agencies and Native American Indian tribes. Coordination with

all of the groups, agencies and individuals involved in the development of the Amendment will continue as projects are implemented.

VII. IMPLEMENTATION, MONITORING, AND EVALUATION

Implementation

The Amended Forest Plan provides direction in the form of goals and objectives, standards and guidelines, monitoring requirements, and a schedule of possible projects. The Amended Forest Plan will be implemented through identification, selection and scheduling of projects to meet the management goals and objectives. The Amended Forest Plan does not include decisions for individual projects.

Forest Interdisciplinary teams develop projects through an integrated resource management approach, using public involvement throughout the process. Each proposed project is subject to site-specific analysis in compliance with NEPA. Considerations revealed through the NEPA process may result in a decision not to implement the project, even though the project is consistent with the Forest Plan. These site-specific analyses may result in environmental assessments, environmental impact statements, categorical exclusions, or an amendment of the Forest Plan. Any resulting documents may be tiered to this FSEIS for this Amended Forest Plan pursuant to 40 CFR 1508.28.

Project schedules will be available for review at the Ranger District Offices and Supervisor's Office. In addition, the Forest will, twice each year, send out a list of proposed projects to be analyzed in the NEPA process in the next 6 months to interested individuals as a part of project scoping. Schedules of possible projects will routinely change as projects are implemented or are removed from the listings for other reasons and as new projects take their place. Adjustments to the schedules may be made based on results of monitoring, budgets, and unforeseen events.

All outputs in the Amended Forest Plan can be accomplished from a physical, biological, and legal perspective, however, the Amended Forest Plan does not guarantee that specific output levels will be met. Factors, such as the demand for timber products, annual Forest Service budgets, and environmental effects of specific projects, influence the final output of goods and services from the Forest.

Timber Management

All timber sales offered after issuance of the Amended Forest Plan will be in compliance with direction contained in the Amended Forest Plan. Timber sales now under contract will be administered under provision of the existing contracts.

The ASQ is defined as the maximum quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified in the Plan, in this case 6 years. **The intent of the Forest Is to offer the full amount of the ASQ during the next 6 years of implementation.** In this case, the Forest considers the ASQ as both an upper limit and a commitment to provide the full amount of the ASQ in order to meet the needs of the local wood processing industries.

The Forest Plan provides the option to apply the full range of silvicultural treatments to all management areas. The Forest will determine the most appropriate method of regeneration and other treatments on an individual timber sale project basis, consistent with the standards and guidelines in the Plan. The final silvicultural prescriptions adopted will reflect the appearance of the characteristic landscape within the parameters of the Visual Quality Objectives.

Approximately 536,240 acres of forested land were designated not suited for timber production in the Amended Forest Plan. While these areas will not be scheduled for timber harvesting during implementation of the Plan in order to produce the ASQ, trees may be cut in order to salvage timber that has been damaged by insects, disease, windthrow, or fire. Timber may also be harvested to protect other multiple-use values in the area. Timber harvesting under these circumstances is provided for in NFMA and the planning regulations at 36 CFR Part 219.27(c)(1).

Timber harvesting will occur on approximately 5,500 acres annually in order to achieve the full ASQ, however, the acres treated may vary according to the mix of silvicultural practice used (selection, shelterwood, commercial thinning, etc.).

The Amended Forest Plan does not include an updated 5 year timber sale action plan (Appendix B in the original Forest Plan). Specific timber sales were topics during discussions with the public during the amendment process. The assumption at the time was that the decisions on these timber sales would be an integral part of the Amended Plan and would be documented in Appendix B through the timber sale implementation schedule.

A recent court decision rendered by the United States District Court for the District of Montana clarified the types of decisions made in a Forest Plan (or amendment to that Plan). Judge Lovell in his November 6, 1991 decision in the *Resources Limited v. Robertson* lawsuit substantially confirmed this agency's ability to conduct forest planning as provided for under current regulations and as those regulations are interpreted by the Secretary and the Chief. Like the Ninth Circuit's opinion in *Griffin v. Yeutter*, this opinion accepts the Forest Service view of forest plans as a framework for making project decisions rather than a collection of project decisions. This decision confirms the position taken by the Chief that there are five specific decisions made in a forest plan. *See* Appeal Decision, Flathead National Forest Land and Resource Management Plan Appeals, August 31, 1988 at 8. Among the five are decisions relating to the level of ASQ and land suitability for timber production (i.e., the two items which define a sale schedule). These items require an amendment if changed in the forest plan. *See* Informational Memorandum for Edward Madigan, Secretary from F. Dale Robertson, Chief, November 14, 1991.

The purpose of timber implementation/activity schedules was most recently articulated by R. Forrest Carpenter, Deputy Regional Forester of the Southwestern Region, in his review of appeals of the decision approving Amendment No. 6 to the Coconino National Forest Plan. *See* 1570 (LMP) April 17, 1991 decision letter. There, it was found that most forest plans contain a number of activity schedules. But, these schedules, it was determined, do not represent decisions made in forest plans, and further, do not make an irreversible and irretrievable commitment of resources. Rather, the schedules are provided to give plan users an approximation of the number, location, and nature of projects that may take place. Activity schedules are not all inclusive and are subject to future funding, market conditions, new information, and other variable factors. Unfortunately, these schedules of possible timber sales have led to some misunderstanding. They have been incorrectly interpreted to imply that the forest plan embodies site-specific timber sale decisions when in fact those decisions are not made until later during project decision-making.

For the reasons discussed above, the Forest will issue an updated 5-year timber sale action plan separately from the Amended Forest Plan.

Old Growth

The Forest Supervisor will conduct a comprehensive old-growth inventory. The Forest is currently conducting an inventory of ponderosa pine old-growth and will survey other forest types immediately thereafter. Until the inventory is completed, the Forest Supervisor will consider retention of ponderosa pine in all appropriate proposed timber sales. After completing the old growth inventory, the Forest Supervisor will review the current

standards and guidelines for managing old growth on the Forest and determine whether an amendment to the Forest Plan is appropriate for old growth management.

Visuals

Due to the high level of public concern, the Forest Supervisor will work carefully with concerned citizens to mitigate visual impacts of timber harvest in the Dunton Meadows and Meadows areas between Rico and the Lizard Head Wilderness. Uneven-aged timber management systems will be emphasized in these areas for all species, unless project analysis demonstrates that other methods are optimum. The Forest Supervisor shall consider options for minimizing road construction and road obliteration where the roads may pass through open meadows and where the road would be clearly visible and obtrusive from the viewing areas of concern.

Insect and Disease Control

Insect and disease (I&D) outbreaks cannot be predicted with sufficient accuracy to allow long-term projection and planning of treatment needs. Timber sales that control insect and disease outbreaks are not scheduled in the alternatives. Research has demonstrated that young faster-growing stands are less susceptible to insect and disease infestation than are older stagnated timber stands. Timber harvesting, therefore, can be used as a tool for prevention of disease and insect infestations by creating young fast-growing timber stands.

The potential for commercial timber harvest as a tool for achieving other resource objectives will be evaluated at the project level against alternative treatment options when and where the need for insect and disease suppression activities arise. If commercial harvest or salvage are used, the timber volume removed may be charged toward the ASQ if the volume is removed from lands designated as suited for timber production and was used in calculating the ASQ (e.g., currently green volume).

Wildlife Habitat Management

Demand for wildlife-related recreation will continue to increase, but not at the level we thought in 1983. Of primary concern to Federal and State wildlife managers is the condition and capacity of wildlife winter range. The Forest will continue to implement habitat improvement projects for winter range, but will continue to emphasize non-commercial vegetation treatments to do so. Where opportunities to use commercial timber harvest are feasible, they will be evaluated on a project specific basis, considering economic and environmental tradeoffs against other feasible treatment alternatives. In summary, none of the commercial timber sales in the 5-year action plan are designed for the express purpose of treating winter range for habitat improvement. Wildlife habitat needs will continue to be an integral consideration in timber sale design.

Water Yield

Increased water yield is a beneficial by-product of timber harvest if produced in an environmentally sound manner. The potential positive economic implications of water yield increases do not influence decisions on the size and location of timber sales. The potential for increased water yield is an important environmental implication that the Forest ID team considers in timber sale design and layout.

Effective Implementation Date

The Amended Forest Plan will be implemented 30 days after the Notice of Availability of the Amendment to the Forest Plan, FSEIS, and Record of Decision appears in the Federal Register.

Mitigation

Mitigation measures are an integral part of the standards and guidelines and management area direction. The management standards were developed through an interdisciplinary effort and contain measures necessary to mitigate or eliminate any long-term adverse environmental effects. Additional mitigation measures may be developed and implemented at the project level consistent with the measures identified in Chapter IV of the DSEIS.

All practical mitigation measures available to avoid or minimize environmental harm have been included in the Amended Forest Plan, based on current knowledge and research. NFMA requirements were incorporated into the planning process and are reflected in the land use allocations and Standards and Guidelines. The Standards and Guidelines and Management Area Direction in the Amended Forest Plan, Chapter III, are a fundamental and integral part of these measures, and as such, they are a basic and essential part of the Amended Forest Plan.

Monitoring and Evaluation

The monitoring and evaluation program is the management control system for the Forest Plan and provides information on the progress and results of implementation. We will evaluate and use this information as feedback to the Forest planning process for possible future change.

Chapter IV of the Amended Forest Plan outlines the specific process that will be used for monitoring. The overall objective of monitoring is to ensure that Standards and Guidelines and Management Area direction are being correctly applied and are producing the desired results. Forest Specialists will use information gathered during monitoring to update inventories, to improve mitigation measures, and to assess the need for amending the Forest Plan.

Standards and Guidelines described in Chapter III of the Amended Forest Plan will not be compromised in order to achieve annual targets or projected outputs. If projected outputs cannot be achieved without breaching Standards and Guidelines, the Forest Supervisor will evaluate the need to amend the Plan. The Forest Supervisor will monitor the timber sales against the ASQ on the basis of cubic foot measurement. The Forest Supervisor will also monitor the acres treated and evaluate any difference between planned levels and actual levels.

Three types of monitoring and evaluation will be conducted:

Implementation Monitoring - determines if plans, prescriptions, projects, and activities are implemented and designed in compliance with Forest Plan objectives and Standards and Guidelines.

Effectiveness Monitoring - determines if plans, prescriptions, projects, and activities are effective in meeting management direction, objectives, and the Standards and Guidelines.

Validation Monitoring - determines if the initial data, assumptions, and coefficients used in development of the Plan are correct, and if there is a better way to meet forest planning regulations, policies, goals, and objectives.

Monitoring and evaluation results are described in an annual report and made available for public review. Based on the evaluation, any need for further action is recommended to the Forest Supervisor.

Monitoring and evaluation will provide information to:

- Compare planned versus applied management standards and guidelines to determine if objectives are achieved [36 CFR 219.12(k)].

- Quantitatively compare planned versus actual outputs and services [36 CFR 219.12 (k)(1)].

- Measure effects of prescriptions, including significant changes in land productivity [36 CFR 219.12 (k)(2)].

- Determine planned costs versus actual costs associated with carrying out prescriptions [36 CFR 219.12 (k)(3)].

- Evaluate effects of National Forest management on adjacent land, resources, and communities [36 CFR 219.7(f)].

- Identify research needs to support or improve National Forest management [36 CFR 219.28].

- Determine if lands are adequately restocked [36 CFR 219.12 (k)(5)(i)].

- Evaluate, at least every 10 years, if lands designated as not suited for timber production should remain in that designation [36 CFR 219.12 (k)(5)(ii)].

- Determine whether maximum size limits for harvest areas should be continued [36 CFR 219.12 (k)(5)(iii)].

- Ensure that destructive insects and disease organisms do not increase to potentially damaging levels following management activities [36 CFR 219.12 (k)(5)(iv)[.

VIII. APPEAL RIGHTS AND APPROVAL

This decision is subject to appeal pursuant to 36 CFR Part 217. Written notice of appeal must be filed within 90 days of the date of public notice of this decision. The appeal must be filed with the Reviewing Officer:

F. Dale Robertson, Chief
USDA Forest Service
P.O. Box 96090
Washington, DC 20090-6090

The notice of appeal must include sufficient narrative evidence and argument to show why this decision should be changed or reversed (36 CFR 217.9). The appellant is required to furnish two copies of the appeal to the Reviewing Officer.

For a period not to exceed 20 days following the filing of a notice of appeal, the Reviewing Officer shall accept requests to intervene in the appeal from any interested or potentially affected person or organization [36 CFR 217.12(a)].

Decisions on site-specific projects are not made in this document. Final decisions on any proposed projects are made after site-specific analysis and documentation in compliance with NEPA and are appealable under 36 CFR Part 217.3.

Anyone concerned about the Amended Forest Plan or Final Supplemental Environmental Impact Statement is encouraged to contact the Forest Supervisor in Durango, Colorado, (303) 247-4874, before submitting an appeal. It may be possible to resolve the concern or misunderstanding in a less formal manner.

If you would like more information about the Amended Forest Plan or FSEIS, review planning records, or discuss the process, please contact:

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303-247-4874

Mary E. Cargill

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5/15/92
Date